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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/899,520

07/05/2001

Damion Searls

5038-68

9906

20575

7590

01/30/2004

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EXAMINER

ZAMANI, ALI A

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 01/30/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,520

Applicant(s)

SEARLS ET AL.

Examiner

Ali A. Zamani

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-16,19 and 21-30 is/are rejected.
- 7) ☐ Claim(s) 5,6,17,18,20,31 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2674

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanase (US Pat. No. 6, 392,871 B1) in view of Lee (US Pat. No. 6,191,758 B1).

In regard to claim 1, Yanase discloses a display subsystem for a portable handheld device comprising: a main body screen (31) configured for fixed monitoring a housing of a portable handheld device (1); an auxiliary display screen (41) configured for adjustable mounting to the housing and for deployment by a user to a position for viewing (see Figs.2 and 12) thereby concurrent with viewing by the user of the main display screen (col. 6, lines 40-44).

Furthermore, Yanase discloses a processor (10) within the housing to manage a screen video memory and a keyboard (111) operatively connected to processor (see Fig. 1). Yanase substantially teaches the above claimed limitations except for teaching a “display screen drive mechanism including a dual screen video memory and an interface”. However, Lee teaches a computer having an auxiliary display device which enables a user to work more effectively by including an auxiliary display device as well as a main display device which includes a dual-screen video memory (614 and 616) (Fig. 6), and an interface (RS232C) adapted to enable pixel data from a first segment of video memory to be presented on main display screen (64) and to

Art Unit: 2674

enable pixel data from a second segment of video memory to be concurrently on auxiliary display screen (70) (see Fig. 5 and 6, col. 6, lines 39-65). Lee further teaches that the interface between memory and auxiliary display screen can be a serial interface portion (520) or can be a parallel interface portion (522) (see col. 6, lines 20-30), those skilled in the art known an interface between memory and auxiliary display screen can be any flexible cable or ribbon cable to physically enable the pixel data from the video memory to be presented on auxiliary display screen. Furthermore, the housing include of a processor (10) and keyboard 11). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the teaching of Lee in the display of Yanase to provide a portable handheld computer incorporating a duplicate display construction to thereby permit simultaneous viewing of the displayed information by the operator and observer.

In regard to claims 2-4 and 7-8, Lee teaches a computer having an auxiliary display device which enables a user to work more effectively by including an auxiliary display device as well as a main display device which includes a dual-screen video memory (614 and 616) (Fig. 6), and an interface (RS232C) adapted to enable pixel data from a first segment of video memory to be presented on main display screen (64) and to enable pixel data from a second segment of video memory to be concurrently on auxiliary display screen (70) (see Fig. 5 and 6, col. 6, lines 39-65). Yanase also discloses the auxiliary display screen (41) is mounted to the housing for pivotal movement relative to main display screen (11) (see Fig. 9). Those skilled in the art known an interface between memory and auxiliary display screen can be any flexible cable or ribbon cable to physically enable the pixel data from the video memory to be presented on auxiliary display screen. Furthermore, the housing include of a processor (10) and keyboard (11).

As to claim 9, Yanase discloses an auxiliary display (41) screen is movably but inseparably mounted to the housing (see Fig. 9).

As to claim 10, Yanase discloses an auxiliary display (41) is intimately physically attached to the housing (see Fig. 12).

In regard to claims 11 and 12, Lee teaches an interface includes a video reply mechanism to couple at least one of main display screen and auxiliary display screen to a respective one of first and second segments of video memory (see Fig. 6).

In regard to claim 13, Yanase discloses an auxiliary display screen (41) is a flat panel (see Figs 9 and 12).

In regard to claim 14, Yanase discloses an auxiliary display screen is mounted to the housing in a configuration such that an edge of the auxiliary screen is adjacent an edge of the main screen (see Fig. 6).

Claim Rejections - 35 USC § 103

Claims 15-16, 19, 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US Pat. NO. 6,297,945 B1) in view of Reddy et. (US Pat. No. 6,215,459 B1).

In regard to claims 15 and 27, Yamamoto discloses a portable handheld device comprising: a housing (100) configured as a part of a body handheld device; a main body (1) fixedly mounted within the body of the device; an auxiliary display (4) adjustably mounted to the body of the device, the auxiliary display (4) manually selectively deployed to a position for viewing by a user concurrent with viewing by the user of the main display (see Fig. 7); a processor contained within the housing (is not shown but those skill in the art knows every handheld computer has a processor). A keyboard (6) operatively connected to processor for key

entry. Yamamoto substantially teaches the above claimed limitations except for teaching a “screen video memory contained within the housing, the memory operatively connected to processor, the memory including a first screen image video memory to store pixel data for auxiliary display”.

However, Reddy et al. disclose a dual display video controller for controlling at least two video displays incorporates a video memory (200) for storing first and second video frames of interleaved pixel data (see Figs 2 and 3, col. 4, lines 60-66).

Thus, it would have been obvious to one of ordinary skill in the art to utilize the controller (200) of Reddy et al, in the device of Yamamoto to provide a handheld device with dual display with a video controller, which can produce different image on different displays and switch the images between the displays.

As to claim 16, Yamamoto discloses an auxiliary display is pivotally mounted on the housing (see Fig. 4).

In regard to claims 19 and 21, those skilled in the art known an interface between memory and auxiliary display screen can be any flexible cable or ribbon cable to physically enable the pixel data from the video memory to be presented on auxiliary display screen.

As to claims 22 and 23, Yamamotos does not teach a dual-screen video memory stores pixel data in first and second segments thereof to represent a substantially contiguous display to be presented on main display and auxiliary display but Reddy et al. disclose a video memory controller coupled to a video memory storing a frame of data of first video image and a different independent frame of data of second video image, wherein even and odd numbered pixels of one frame of data of a first video image are respectively stored in first alternate byte planes of video

Art Unit: 2674

memory and even and odd numbered pixels of a different independent frame of data of a second video image are stored in second alternate byte plane of video memory that are interleaved with first alternate c (see Fig. 3).

As to claim 24, Reddy et al. disclose a hardware mechanism operatively coupled between at least one of main display and auxiliary display to a respective one of screen image video memory (see Fig. 2, col. 7, lines 15-30).

As to claims 25 and 26, Yamamoto discloses an auxiliary display (318) includes a flat panel (Fig. 11), also the edge of the auxiliary screen (318) is adjacent an edge of the main screen (see Figs. 4 and 9).

In regard to claims 28 and 29, Yamamoto discloses an auxiliary display is performed such that the auxiliary display is adjustably (pivotally) mounted to a body portion of the device (Fig. 11). AS to claim 30, those skilled in the art known an extension between an outside edge of the main body and an inside edge of the auxiliary display can be any flexible cable.

Claims 5-6, 17-18, 20, 31 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2674

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

January 22, 2004



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**